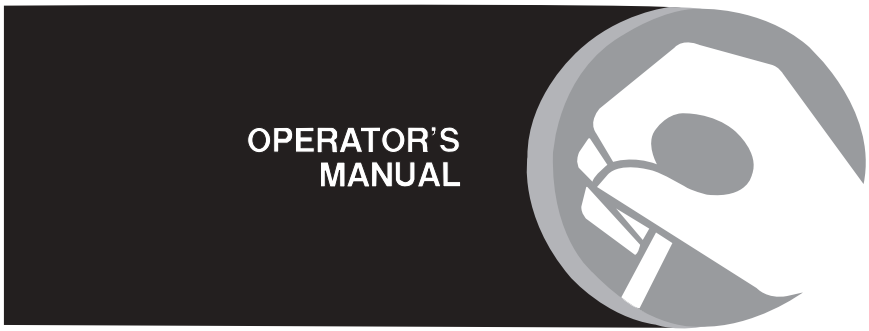
# ET-3303-J 3 1/4-INCH BELT SANDER

JOHN DEERE




**CAUTION**
**RISK OF INJURY!**
**READ MANUAL BEFORE OPERATING!**
**THIS MANUAL IS AN IMPORTANT PART OF THE BELT SANDER AND SHOULD REMAIN WITH THIS UNIT WHEN YOU SELL OR RENT IT.**

# Introduction

Congratulations on the purchase of your new Belt Sander! You can be assured your belt sander was constructed and designed with quality and performance in mind. Each component has been rigorously tested to ensure the highest level of acceptance.

This operator's manual was compiled for your benefit. By reading and following the simple safety, installation, operation, maintenance and troubleshooting steps described in this manual, you will receive years of trouble-free operation from your new tool. The contents of this manual are based on the latest product information available at the time of publication. The manufacturer reserves the right to make changes in price, color, materials, equipment, specifications or models at any time without notice.

Once the unit has been removed from the box, immediately write in the serial number of your unit in the space provided below.

**SERIAL NUMBER**_____

Inspect for signs of obvious or concealed freight damage. If damage does exist, file a claim with the transportation company immediately. Be sure that all damaged parts are replaced and that the mechanical problems are corrected prior to operation of the unit. If you require service, contact your Customer Service.

Mi-T-M® Corporation, 8650 Enterprise Drive, Peosta, IA 52068
1-877-JD-KLEEN / (1-877-535-5336) Fax 563-556-1235
Monday - Friday 8:00 a.m. - 5:00 p.m. CST

Please have the following information available for all service calls:

1. Model Number
2. Serial Number
3. Date and Place of Purchase

## ⚠ WARNING

**WEAR RESPIRATORY PROTECTION**

Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-base paints,
- Crystalline Silica from bricks, cement and other masonry products, and
- Arsenic and Chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well ventilated area and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

# Table of Content

# Safety

## RECOGNIZE SAFETY INFORMATION

This is the safety alert symbol. When you see this symbol on your tool or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

## UNDERSTAND SIGNAL WORDS

**⚠DANGER**

**⚠WARNING**

**⚠CAUTION**

A "DANGER, WARNING or CAUTION" safety warning will be surrounded by a "SAFETY ALERT BOX." This box is used to designate and emphasize Safety Warnings that must be followed when operating this tool.

Accompanying the Safety Warnings are "signal words" which designate the degree or level of hazard seriousness. The "signal words" used in this manual are as follows:

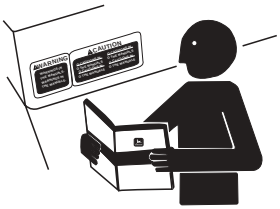
***DANGER*:** Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

***WARNING*:** Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

***CAUTION*:** Indicates a potentially hazardous situation which, if not avoided MAY result in minor or moderate injury.

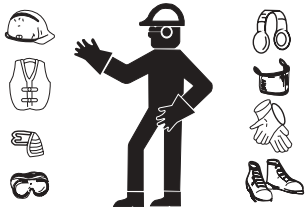
## GENERAL SAFETY RULES

**WARNING: Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/ or serious personal injury.**



**SAVE THESE INSTRUCTIONS**

# ⚠ WARNING



**KEEP WORK AREA CLEAN AND WELL LIT.**
Cluttered areas and benches invite injuries.

**CONSIDER WORK AREA ENVIRONMENT**.
Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit. Don't use tool in presence of flammable liquids or gases. Power tools produce sparks during operation. They also spark when switching ON/ OFF. Never use power tools in dangerous sites containing lacquer, paint, benzine, thinner, gasoline, gases, adhesive agents, and other materials which are combustible or explosive.

**GUARD AGAINST ELECTRIC SHOCK**
Prevent body contact with grounded surfaces. For example, pipes, radiators, ranges, refrigerator enclosures.

**KEEP CHILDREN AWAY**
Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.

**STORE IDLE TOOLS**
When not in use, tools should be stored in dry, and high or locked location - out of reach of children.

**DRESS PROPERLY**
Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and nonskid footwear are recommended when working outdoors.

**USE SAFETY GLASSES**
Also use face or dust mask if cutting operation is dusty. All persons in the area where power tools re being operated should also wear safety eye protectors and face or dust masks.

**SECURE WORK**
Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.


## ⚠ WARNING

**DON'T OVERREACH**
Keep proper footing and balance at all times.

**MAINTAIN TOOLS WITH CARE**
Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and replace if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.

**DISCONNECT TOOLS**
When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.

**AVOID UNINTENTIONAL STARTING**
Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugged in.

**SECURELY MOUNT ACCESSORIES AND BLADES TO THE TOOL MAIN BODY**
Extra care must be taken when using tools on elevated location (such as a roof ladder, scaffold, or the like) to prevent injury to someone on a lower level in the event the tool and/or accessory should drop.

**NEVER TOUCH THE MOVING PARTS**
Never touch the moving parts such as blades, bits, cutters and others.

## ⚠ CAUTION

**DON'T FORCE TOOL**
It will do the job better and safer at the rate from which it was intended.

**USE RIGHT TOOL**
Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended - for example - don't use circular saw for cutting tree limbs or logs.

**DON'T ABUSE CORD**
Never carry tool by cord or yank it to disconnect from receptacles. Keep cord from heat, oil and sharp edges.

**REMOVE ADJUSTING KEYS AND WRENCHES**
Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.


# ⚠ CAUTION

**OUTDOOR USE EXTENSION CORDS**
When tool is used outdoors, use only extension cords intended for use outdoors and so marked.

**STAY ALERT**
Watch what you are doing. Use common sense. Do not operate tool when you are tired.

**CHECK DAMAGED PARTS**
Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by a John Deere Dealer unless otherwise indicated elsewhere in this instruction manual. Have defective switched replaced by a John Deere Dealer. Do not use tool if switch does not turn it on and off.

**AVOID USING A POWER TOOL FOR APPLICATIONS OTHER THAN THOSE SPECIFIED**
Never use a power tool for applications other than those specified in the instruction manual.

**ENSURE SAFE OPERATION THROUGH CORRECT HANDLING**
Secure safe operation through correct handling by observing the instructions described herein. Do not employ accessories other than those specified herein; otherwise, a hazardous condition may be created. Never allow a power tool to be used by persons not familiar with correct handling (such as children) or by those who cannot handle the tool correctly.

**CONFIRM THAT NO ITEMS SUCH AS AN ELECTRIC CABLE OR CONDUIT ARE BURIED INSIDE**
In places where live wiring may be hidden behind a wall, floor, ceiling, etc. do not hold or contact any metal parts of the tool. In such cases, metal parts could become electrically live and present a serious shock hazard.

**KEEP THE RIGHT PARTS IN THE RIGHT POSITION**
Do not remove covers and screws which have been factory-mounted. They perform important respective roles. Keep them in the right positions.

**SHOULD THE PLASTIC HOUSING OR HANDLE OF A POWER TOOL BE CRACKED OR DEFORMED, DO NOT USE IT**
Since cracked or deformed parts may lead to an operator receiving an electric shock, do not use such a power tool. Immediately have it repaired.


# ⚠CAUTION

**ALWAYS KEEP THE MOTOR AIR VENT FULLY OPENED**
A constantly open motor air vent is necessary to allow air to come in and out for cooling the motor. Do not allow it to become clogged up, even if dust is blown through it.

**OPERATE POWER TOOLS AT THE RATED VOLTAGE**
Operate power tools at voltages specified on the nameplates.

**STOP OPERATION IMMEDIATELY IF ANY ABNORMALITY IS DETECTED**
Should a power tool be detected as out of order or should other abnormalities be observed during operation, stop using the tool immediately.

**NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.**
Don't leave tool until it comes to a complete stop.

**CAREFULLY HANDLE POWER TOOLS**
Should a power tool be dropped or struck against hard materials inadvertently, it may be deformed, cracked, or damaged.

**DO NOT WIPE PLASTIC PARTS WITH SOLVENT**
Solvents such as gasoline, thinner, benzine, carbon tetrachloride, and alcohol may damage and crack plastic parts. Do not wipe them with such solvents. Wipe plastic parts with a soft cloth lightly dampened with soapy water.

**WHEN REPLACING A COMPONENT PART, ADOPT THE SAME TYPE**
When replacing a component part with a new one, adopt the same type of new part. Also, never attempt to repair a power tool yourself.

**POLARIZED PLUGS**
To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other).
This plug will fit in a polarized outlet only one way.
If the plug does not fit fully in the outlet, reverse the plug.
If it still does not fit, contact a qualified electrician to install the proper outlet.
Do not change the plug any way.

# CAUTION

**EXTENSION CORD**

Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Table 1
MINIMUM GAGE FOR CORD SETS

| | | Total Length of Code in Feet (Meter) | | | |
|---|---|---|---|---|---|
| | | 0-25 (0-7.6) | 26-50 (7.9-15.2) | 51-100 (15.5-30.05) | 101-150 (30.8-45.7) |
| Ampere Rating | | AWG Size of Cord | | | |
| More Than | Not More Than | | | | |
| 0 | 6 | 18 | 16 | 16 | 14 |
| 6 | 10 | 18 | 16 | 14 | 12 |
| 10 | 12 | 16 | 16 | 14 | 12 |
| 12 | 16 | 14 | 12 | Not recommended | |

**WARNING: AVOID ELECTRICAL SHOCK HAZARD. NEVER USE THIS TOOL WITH A DAMAGED OR FRAYED ELECTRICAL CORD OR EXTENSION CORD. INSPECT ALL ELECTRICAL CORDS REGULARLY. NEVER USE IN OR NEAR WATER OR IN ANY ENVIRONMENT WHERE ELECTRIC SHOCK IS POSSIBLE.**

**DOUBLE INSULATION SYSTEM ENHANCES SAFE OPERATION**

DOUBLE INSULATION

To enhance safe operation of this electric power tool, JOHN DEERE has adopted a double insulation system. The term "double insulation" used here denotes an insulation systems with two insulations physically separated and arranged between the electrically conductive material connected to the power supply and outer frame subject to contact by the operator.

Thus, the power tool is termed double insulated and both the mark and " " double insulation", or either one is indicated on the name plate.

While no external grounding is required with this system, normal safety precautions as outlined in this manual must still be followed.

To maintain the effectiveness of the double insulation system, follow the precautions described below:

1. Always contact your John Deere Dealer when assembling, disassembling or replacing parts other than accessories or carbon brushes. Improper assembly and/or replacement with wrong parts may result in eliminating the double insulation-feature.
2. Clean the exterior of the tool with a soft cloth moistened with soapy water, and dry thoroughly. Choleric solvent, gasoline, and thinner will cause plastic compo nents to dissolve.

**SAVE THESE INSTRUCTIONS AND MAKE THEM AVAILABLE TO OTHER USERS AND OWNERS OF THIS TOOL!**

# Functional Description

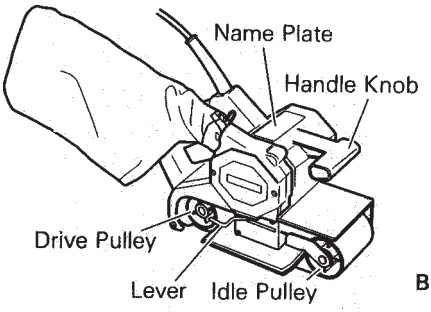
**MODEL:**
ET-3303-J 3 1/4-INCH BELT SANDER

***NOTE:*** *The information contained in this Instruction Manual is designed to assist you in the safe operation and maintenance of the power tool.*

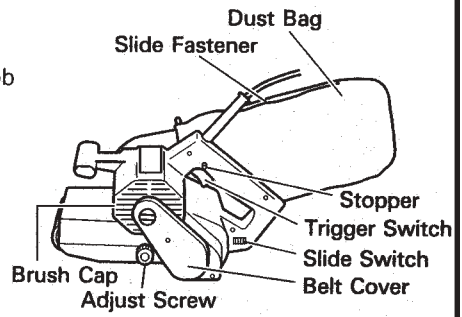
NEVER operate, or attempt any maintenance on the tool unless you have first read and understood all safety instructions contained in this manual.

Some illustrations in this Instruction Manual may show details or attachments that differ from those on your own power tool

**NAME OF PARTS:**




(Fig. 1a)




(Fig. 1b)

**SPECIFICATIONS:**
3 1/4-INCH BELT SANDER ET-3303-J:

| | | |
|---|---|---|
| Motor | | Single-Phase, Series: Wound Commutator Motor |
| Power Source | | Single-Phase 115V AC/DC 60Hz |
| Sanding Belt Size | | 3”x21” (76mmx533mm) |
| Input | | 950W |
| No-Load | High | 1475ft/min (450m/min) |
| Belt Speed | Low | 1180ft/min (360m/min) |
| Weight | | 10.8 lbs. (4.9kg) |

# Operation

**APPLICATIONS:**

- Sanding finish and flooring finish of woodwork products.
- Base polishing of Lumber-coated planes.
- Sanding finishes of metal surfaces.
- Base polishing of metal-coated planes, rust removal, or paint removal to refinishing.
- Surface finish of slate, concrete, and so on.

**PRE-OPERATION:**

Before using the Electric Power Tool, complete the following preparations.

**CAUTION: CONFIRM THE FOLLOWING POINTS PRIOR TO CONNECTING THE PLUG TO THE POWER SOURCE.**

1. Confirm the applied power source:
   Be sure to operate the Electric Power Tool in the voltage specified on the name plate.

2. Confirm that the power switch is turned "OFF":
   If the plug is connected to the power receptacle while the power switch is turned "ON", the machine starts operating unexpectedly, inviting serious accidents. Prior to using the Electric Power Tool, be sure to confirm that the power switch is turned "OFF".

3. Extension cord:
   When the work area is far away from the power source, use an extension cord of sufficient thickness and rated capacity. The extension cord should be kept as short as possible.

**CAUTION: DAMAGED CORD MUST BE REPLACED OR REPAIRED.**

4. Confirming condition of the environment:
   Confirm that the work site is placed under appropriate conditions conforming to prescribed precautions.

5. Confirm the power receptacle:
   If the power receptacle only loosely accepts the plug, the receptacle must be repaired. Contact the nearest electric store for repair service. If such a faulty receptacle is used, it may cause overheating, resulting in a serious hazard.

6. Attach sanding belt:
   For details, refer to the item “HOW TO HANDLE SANDING BELT”

**PRECAUTIONS ON USING BELT SANDER**

1. Align the inside arrow mark of the sanding belt with the revolving direction of the drive pulley.
2. Sanding by impact and cutting by side-of-belt contact should be avoided.
3. Be careful of sanding sparks.
4. After operation, sweep the sanding dust away from the dust bag to avoid serious accidents.
5. Don’t use water, or oil as lubricant.
6. Ascertain that the sanding workpiece contains neither nails nor other harmful foreign matter.
7. Sanding glass fiber not recommended.
8. After operation, blow away the dust on the belt and the pulleys.

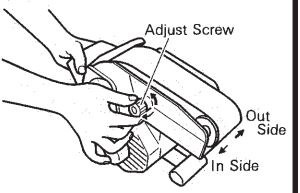
# Operation

**OPERATION:**

HOW TO USE THE BELT SANDER:

1. How to adjust sanding position:
   Push switch and turn sanding belt to check position. Adjust sanding belt so that both edges protrude 1/6" - 1/8" (1.6mm-3mm) past edges of pulleys.

   If sanding belt is operated too far on the inside, it may cause abrasion and damage machine. Adjust sanding belt position by turning adjust screw (Fig. 2).
   - Turn adjust screw clockwise to move belt in.
   - Turn adjust screw counterclockwise to move belt out.



(Fig. 2)

**CAUTION: IF SANDING BELT MOVES DURING OPERATION, ADJUSTMENT CAN BE MADE WHILE IN OPERATION.**

2. To turn on switch:
   Turn on switch while holding machine away from surface to be worked on. If machine is placed on surface when switch is pushed, surface may be badly scratched. The same applies when stopping the machine.

3. How to hold the machine:
   Grasp handle and handle knob and hold machine against surface to be worked on so that it contacts surface lightly.

   Weight of machine itself is sufficient for sanding and polishing at highest efficiency. Do not apply any additional pressure, for this would place unnecessary load on motor, shortening life of sanding belt and lower work efficiency.

4. How to move machine:
   Move machine forward first and then backward, repeating this motion.

5. How to select the proper sanding belt:
   Choose sanding belt of proper grain size and grain type for your specific purpose, by referring to the tables below (Table 1 and Table 2):

| Derived finish | Proper grain size |
|---|---|
| Coarse finish | 30-40 |
| Medium finish | 40-100 |
| Semi fine finish | 80-240 |
| Fine finish | 180-400 |

Table 1

| Grain type | Surface to be worked on |
|---|---|
| AA | Steel, wood |
| WA | Wood, bamboo |
| CC | Nonferrous metals, slate, plastics, concrete |

Table 2

**CAUTIONS:**

**- FOR GRAIN SIZE, REFER TO TABLE ABOVE.**

**- SANDING BELT GRAIN SHOULD BE COARSER THAN SANDPAPER USED FOR MANUAL WORK.**

**- USE SANDING BELT OF SAME SIZE GRAIN UNTIL UNIFORM SURFACE IS OBTAINED.**

**CHANGING GRAIN SIZES MAY RESULT IN POOR FINISH.**

# Operation

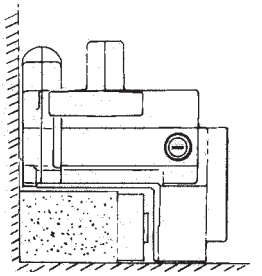
**OPERATION (CONTINUED):**

6. How to change belt speed:
   Either high speed or low speed operation can be selected according to the materials or the operating conditions. Selecting sanding belt operating speed can be achieved by shifting the tumbler switch in a specified direction.

| Symbol | Speed |
|---|---|
| H | High-speed |
| L | Low-speed |

7. How to operate switch:
   The power switch is turned ON when the trigger is pulled, and if the stopper is once depressed, the power switch becomes locked, allowing continuous operation. The stopper can be released by pulling the trigger.

8. How to work on corners:
   Corners can be sanded and polished by using machine as in Fig. 3.

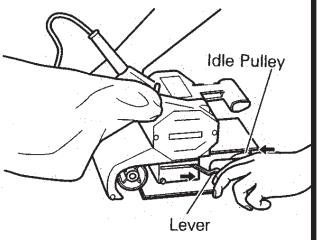


(Fig. 3)

HOW TO HANDLE SANDING BELT:

**CAUTION: BE SURE TO SWITCH POWER OFF AND DISCONNECT THE ATTACHMENT PLUG FROM THE POWER RECEPTACLE TO AVOID SERIOUS TROUBLE.**

1. How to attach sanding belt (Fig. 4):
   a. Pull lever with finger, idle pulley will then move backward.
   b. Place on drive pulley and idle pulley passing it over the outside of shoe plate and making sure that the arrow on inside of belt coincides with rotational direction of drive pulley.

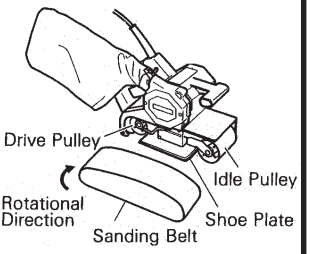



(Fig. 4)

**CAUTION: SANDING BELT INSTALLED IN THE WRONG DIRECTION WILL LOWER WORK EFFICIENCY AND SHORTEN LIFE OF SANDING BELT.**

   c. Push lever with finger, idle pulley will then move forward and give proper tension to sanding belt. Then, adjust sanding belt position (refer to page 12).

2. How to remove the sanding belt (Fig. 5):
   Pull lever with finger, sanding belt will then sag and can be taken off pulleys easily.




(Fig. 5)

# Operation

**OPERATION (CONTINUED):**
DUST REMOVAL:
When an excessive amount of dust is deposited in the dust bag, dust-collecting efficiency will sharply drop.

Remove dust from the bag when it is deposited up to about 2/3 the bag capacity, where by dust collecting efficiency (as well as working efficiency) will be ensured.

Remove dust from the bag as follows:

a. Loosen the support bar and remove the dust bag.
b. The bag inlet can be opened by unzipping the slide fastener.

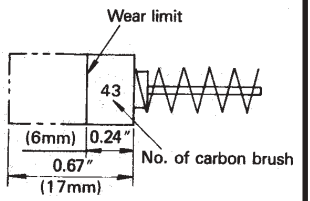
# Maintenance and Inspection

**MAINTENANCE AND INSPECTION:**

**CAUTION: BE SURE TO SWITCH POWER OFF AND DISCONNECT THE PLUG DURING MAINTENANCE AND INSPECTION.**

1. Inspecting the Sanding Belts:
   If the sanding belt becomes loaded with debris or dull, the efficiency will drop significantly. It may be necessary to clean or replace the sanding belt frequently, depending on the type of use.

2. Inspecting the mounting screws:
   Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious hazard.



(Fig. 6)

3. Inspecting the carbon brushes (Fig. 6):
   The motor employes carbon brushes which are consumable parts. Since an excessively worn carbon brush could result in motor trouble, replace the carbon brush with a new one which has the same carbon brush No. shown in figure when it becomes worn to or near the “wear limit”. In addition, always keep carbon brushes clean and ensure that they slide freely within the brush holders.

4. Replacing a carbon brush:
   Disassemble the brush cap with a minus-head screwdriver. The carbon brush can then be easily removed.

# Maintenance and Inspection

**SERVICE AND REPAIRS**
All quality tools will eventually require servicing or replacement of parts due to wear from normal use. These operations should ONLY be performed by a John Deere Dealer.

**REPLACEMENT PARTS**
When servicing use only identical replacement parts.

***NOTE:*** *Due to JOHN DEERE's continuing program of research and development, the specifications herein are subject to change without prior notice.*

**APPLICATIONS:**
- Sanding finish and flooring finish of woodwork products.
- Base polishing of Lumber-coated planes.
- Sanding finishes of metal surfaces.
- Base polishing of metal-coated planes, rust removal, or paint removal to refinishing.
- Surface finish of slate, concrete, and so on.

**STANDARD ACCESSORIES:**

**CAUTION: RECOMMENDED ACCESSORIES FOR THE ELECTRIC POWER TOOL ARE MENTIONED IN THIS MANUAL. THE USE OF ANY OTHER ATTACHMENT OR ACCESSORY IS HAZARDOUS.**

| | | |
|---|---|---|
| 1. | Endless Sanding Belt (Grain size: #80) | 1 |
| 2. | Dust Bag | 1 |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Manufactured for Deere & Company,
Moline, Illinois 61265
3 1/4-Inch Belt Sander Operator's Manual
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